

Maryland Historical Trust

Maryland Inventory of Historic Properties number: B-4613

Name: MD 147 over Herring Run (Herring Run Bridge)

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

| MARYLAND HISTORICAL TRUST | |
|---|-----------------------------------|
| Eligibility Recommended <u>X</u> | Eligibility Not Recommended _____ |
| Criteria: <u> </u> A <u> </u> B <u>X</u> C <u> </u> D Considerations: <u> </u> A <u> </u> B <u> </u> C <u> </u> D <u> </u> E <u> </u> F <u> </u> G <u> </u> None | |
| Comments: _____ _____ _____ | |
| Reviewer, OPS: <u>Anne E. Bruder</u> | Date: <u>3 April 2001</u> |
| Reviewer, NR Program: <u>Peter E. Kurtze</u> | Date: <u>3 April 2001</u> |

MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. B-4613

SHA Bridge No. BC 3212 Bridge name MD 147 over Herring Run (Herring Run Bridge)

LOCATION:

Street/Road name and number [facility carried] Harford Road (MD 147)

City/town Baltimore Vicinity _____

County Baltimore

This bridge projects over: Road _____ Railway _____ Water X Land _____

Ownership: State _____ County _____ Municipal X Other _____

HISTORIC STATUS:

Is the bridge located within a designated historic district? Yes _____ No X

National Register-listed district _____ National Register-determined-eligible district _____

Locally-designated district _____ Other _____

Name of district _____

BRIDGE TYPE:

Timber Bridge _____:

Beam Bridge _____ Truss -Covered _____ Trestle _____ Timber-And-Concrete _____

Stone Arch Bridge _____

Metal Truss Bridge _____

Movable Bridge _____:

Swing _____

Vertical Lift _____

Bascule Single Leaf _____

Retractable _____

Bascule Multiple Leaf _____

Pontoon _____

Metal Girder _____:

Rolled Girder _____

Plate Girder _____

Rolled Girder Concrete Encased _____

Plate Girder Concrete Encased _____

Metal Suspension _____

Metal Arch _____

Metal Cantilever _____

Concrete X _____:

Concrete Arch X Concrete Slab _____ Concrete Beam _____ Rigid Frame _____

Other _____ Type Name _____

DESCRIPTION:

Setting: Urban ☒ Small town _____ Rural _____

Describe Setting:

Bridge BC 3212 carries Harford Road (MD 147) over Herring Run in Baltimore City. Harford Road (MD 147) runs north-south and Herring Run flows west to east. The bridge is located within the Herring Run Park in the City of Baltimore.

Describe Superstructure and Substructure:

Bridge BC 3212 is a 3-span, 4-lane, closed spandrel concrete barrel arch bridge. The bridge was built in 1911, and was widened in 1927. The structure is 75.6 meters (248 feet) long and has a clear roadway width of 13.4 meters (44 feet); there are two sidewalks each measuring 2 meters (6.5 feet) wide. The out-to-out width is 18.2 meters (60 feet). The superstructure consists of three arches which support a concrete deck and concrete parapets. Arch spans #1 and #3 each have a span length of 17.7 meters (58 feet), while the center span has a length of 38.4 meters (126 feet). The bridge has a clear height of 8.2 meters (26.8 feet) over a Herring Run Park service road. The structure has concrete closed ornamental parapets. The substructure consists of two concrete abutments, two concrete piers and four concrete wingwalls. A plaque states that the bridge was built by the State Roads Commission in 1911. The bridge has a sufficiency rating of 44.2.

According to the 1995 inspection report, this structure was in fair condition with cracking, spalling and scaling. The asphalt wearing surface is cracked and the parapets have cracking with heavy scaling and efflorescence. The bottom of the arches are typically in poor condition with large cracks and efflorescence. Pier 1 has delaminated concrete on its west face. The wingwalls have light to moderate scaling and spalling with exposed reinforcement.

Discuss Major Alterations:

According to the 1995 Bridge Inspection Report, the structure was constructed in 1911 and was widened in 1927.

HISTORY:

WHEN was the bridge built: 1911, 1927

This date is: Actual ☒ Estimated _____

Source of date: Plaque ☒ Design plans _____ City/County bridge files/inspection form ☒

Other (specify): _____

WHY was the bridge built?

Harford Road (MD 147) was established by the end of the eighteenth century and may follow the route of an earlier trail. The road was never as heavily traveled as the nearby Bel Air Road (U.S. 1). In 1908, the State Roads Commission, established under Governor Crothers, began a seven-year project that created a statewide road network through improvement of existing roads. Harford Road was one of those designated for improvement, and was paved and graded within Baltimore City and

within Baltimore County from the city line north for a length of three miles. Timber bridges along Harford Road were also replaced at this time.

WHO was the designer?

State Roads Commission

WHO was the builder?

State Roads Commission

WHY was the bridge altered?

The bridge was widened to allow for increased traffic across the bridge.

Was this bridge built as part of an organized bridge-building campaign?

Yes, this bridge was built as part of the building and widening of Harford Road.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:

A - Events X B- Person
C- Engineering/architectural character X

The bridge is eligible for the National Register of Historic Places under Criteria A and C, as a significant example of concrete arch construction. The bridge was originally built by the State Roads Commission as part of the improvements to Harford Road, and was later widened under those same efforts. The structure has a high degree of integrity and retains such character-defining elements of the type as solid paneled concrete parapets, spandrel walls, arch barrel and ring, abutments, piers, and wingwalls.

Was the bridge constructed in response to significant events in Maryland or local history?

The advent of modern concrete technology fostered a renaissance of arch bridge construction in the United States. Reinforced concrete allowed the arch bridge to be constructed with much more ease than ever before and maintained the load-bearing capabilities of the form. As the structural advantages of reinforced concrete became apparent, the heavy, filled barrel of the arch was lightened into ribs. Spandrel walls were opened, to give a lighter appearance and to decrease dead load. This enabled the concrete arch to become flatter and multi-centered, with longer spans possible. Designers were no longer limited to the semicircular or segmental arch form of the stone arch bridge. The versatility of reinforced concrete permitted development of a variety of economical bridges for use on roads crossing small streams and rivers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7 year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920-1929, numerous highway improvements occurred in response to the

increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic, with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of \$3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund (with an equal sum from the counties) the building of lateral roads. The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930. By 1930, Maryland's primary system had been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's.

As the nation's automotive traffic increased in the early twentieth century, local road networks were consolidated, and state highway departments were formed to supervise the construction and improvement of state roads. With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction through the standardization of bridge designs.

The concept and practice of standardization was one of the most important developments in engineering of the twentieth century. In Maryland, as in the rest of the nation, the standardized concrete types became the predominant bridge types built. In the period 1911 to 1920 (the decade in which standardized plans were introduced), beams and slabs constituted 65 percent and arches 35 percent of the extant 29 bridges built in Maryland during this period. In the following decade, 1921-1930, the beam (now the T-beam) and slab increased to 73 percent and the arch had declined to 27 percent of the 129 extant bridges; in the next decade (1931-1940), the beam and slab achieved 82 percent and arches had further declined, constituting only 18 percent of the total of extant bridges built on state-owned roads between 1931 and 1946.

Although beam and slab bridges became the utilitarian choice, it appears that the arch was selected when aesthetic as well as other site conditions were considered. The architectural treatment of extant arch bridges supports this assessment. Many of these bridges were multiple span structures with open spandrels or masonry facing. Another decorative feature of the concrete arch bridge was an open, balustrade-style parapet. Despite the popularity of ornamental arches and the increase in use of beam and slab bridges, examples of simpler, single and multiple span closed concrete arch bridges with solid parapets continued to be constructed throughout the early twentieth century.

Harford Road (MD 147) was established by the end of the eighteenth century and may follow the route of an earlier trail. The road was never as heavily traveled as the nearby Bel Air Road (U.S. 1). In 1908, the State Roads Commission, established under Governor Crothers, began a seven-year project that created a statewide road network through improvement of existing roads. Harford Road was one of those designated for improvement, and was paved and graded within Baltimore City and within Baltimore County from the city line north for a length of three miles. Timber bridges along Harford Road were also replaced at this time.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?

The bridge is located in an area which does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

The bridge is a good example of the State Roads Commission's early concrete arches which was later widened.

Does the bridge retain integrity of important elements described in Context Addendum?

The bridge retains the character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including solid panel concrete parapets, spandrel walls, arch barrel and ring, abutments, piers, and wingwalls, however some deterioration is evident.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

This bridge is a significant example of the work of the State Roads Commission in the 1910s and 1920s.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

City/County inspection/bridge files X **SHA inspection/bridge files** _____
Other (list): _____

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P.A.C. Spero & Company and Louis Berger & Associates

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Tyrrell, H. Grattan

1909 *Concrete Bridges and Culverts for Both Railroads and Highways*. The Myron C. Clark Publishing Company, Chicago and New York.

B-4613

SURVEYOR:

Date bridge recorded December 1997

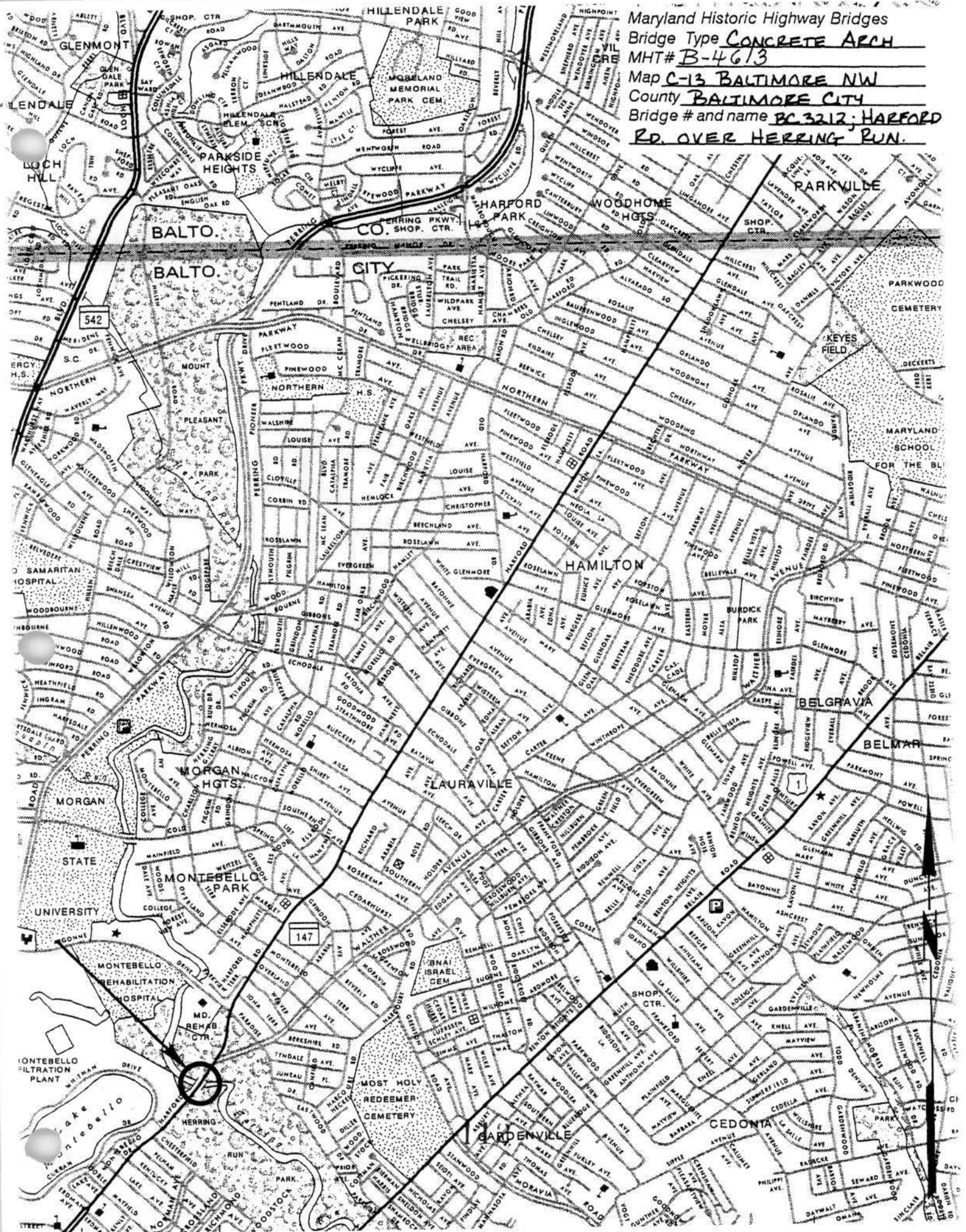
Name of surveyor Wallace, Montgomery & Associates / P.A.C. Spero & Company

Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204

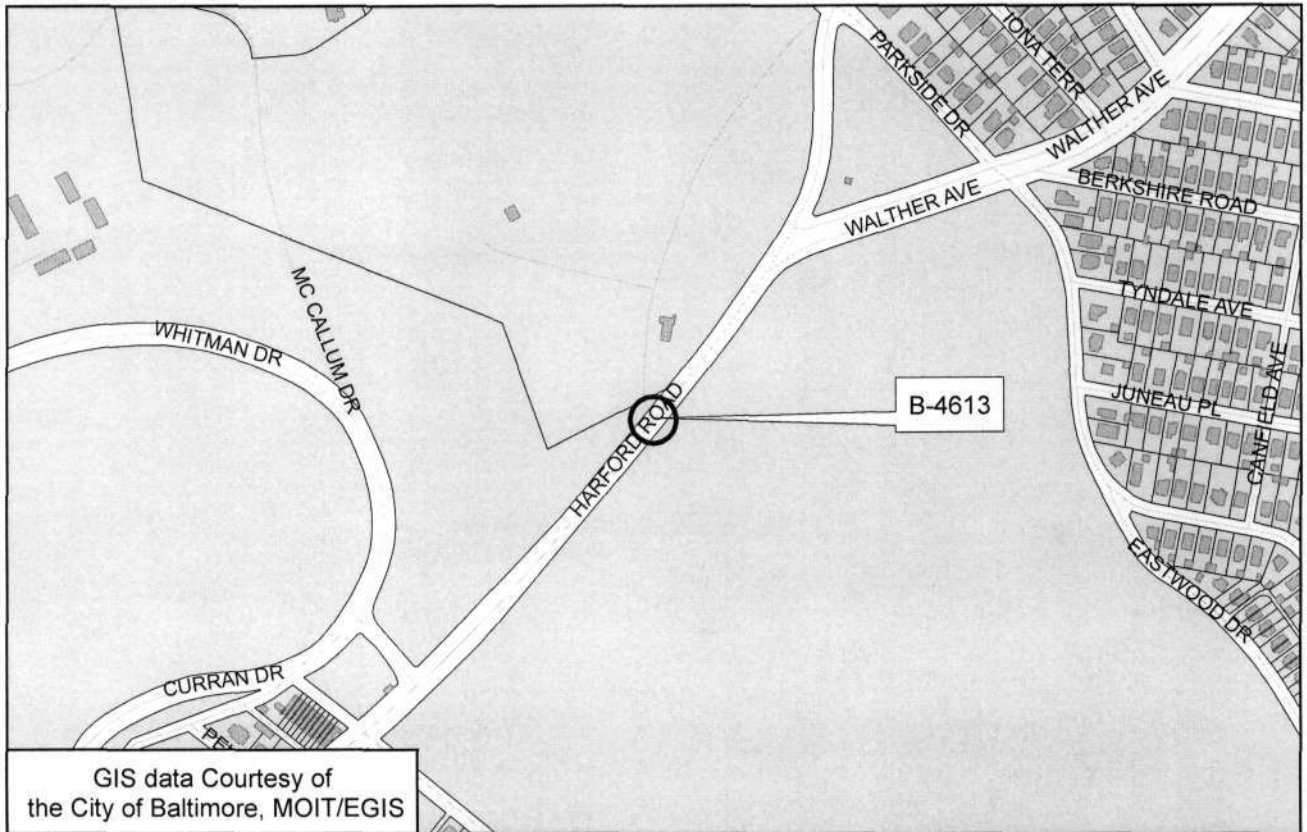
Phone number (410) 296-1635

FAX number (410) 296-1670

Maryland Historic Highway Bridges
Bridge Type CONCRETE ARCH
MHT# B-4613
Map C-13 BALTIMORE NW
County BALTIMORE CITY
Bridge # and name BC 3212; HARFORD
RD. OVER HERRING RUN.



B-4613
Herring Run Bridge, Bridge 3212
Harford Road (MD 147) over Herring Run
Baltimore City
Baltimore East Quad





Inventory # B-4613

Name 3212- HARFORD RD OVER HERRING RUN

County/State BALTIMORE CITY/MD

Name of Photographer TIM SCHOEN

Date 1/95

Location of Negative SHA

Description SOUTH APPROACH

Number 1 of 36 5

darkroom [30] 545 4611 [175]



Inventory # B-4613

Name 3212 HARFORD RD OVER HERRING RUN

County/State BALTIMORE CITY/MD

Name of Photographer TIM SCHEN

Date 1/95

Location of Negative SAN

Description WEST ELEVATION

Number 2 of 365

3-11-95 11:56 AM 13563 4511 N 11-95



Inventory # B-4613

Name 3212-HARFORD RD OVER HERRING RUN

County/State BALTIMORE CITY/MD

Name of Photographer TIM SCHUEN

Date 1/95

Location of Negative SHA

Description EAST ELEVATION

Number 3 33 of 34 5

04 JAN 11 1995 2951ZETIM000XJEP



Inventory # B-4613

Name 3212-HARFORD RD OVER HERRING RUN

County/State BALTIMORE CITY/MD

Name of Photographer TIM SCHUEN

Date 1/95

Location of Negative SHA

Description NORTH APPROACH

Number 4 of 365

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HERRING RUN BRIDGE.

BUILT BY

THE STATE ROADS COMMISSION.

1911.

Inventory # B-4613

Name 342-HARFORD RD OVER HERRING RUN

County/State BALTIMORE CITY MD

Name of Photographer TIM SCHEN

Date 1/95

Location of Negative SHA

Description ID PLAQUE @ NORTH END OF
WEST PARAPET

Number 5 of 365

darkroom[34]563 4611 H H H H 1196